

# CellPro

## Large Capacity Stackable Incubator Shaker



### *Introduction*

The Large Capacity Stackable CO<sub>2</sub> Incubator Shaker is a versatile solution for a wide range of cell cultures, from CHO and hybridoma to mammalian and insect cells. Serving as the ideal precursor to fermenter cultures, it boasts exceptional bearing technology, ensuring a stable and impressively quiet startup, even when multiple layers are stacked, eliminating disruptive vibrations. Its innovative air circulation system guarantees precise temperature field uniformity. Additionally, its stackable design accommodates up to 2 or 3 layers, optimizing laboratory space for more efficient use.

### *Product Features*

- 1. Space Optimization:** The one-, two-, or three-story stackable design offers users maximum usable space within a minimal footprint.
- 2. Versatile Control:** Designed for user convenience, lower two floors feature downward flip-up doors, while the third floor has upward flip-up doors. Each layer offers independent control over temperature, speed, and concentration. Users can easily customize settings to meet specific requirements.
- 3. Clear Observation:** The hollow tempered glass door provides unobstructed views of the interior from all angles, eliminating the need to open the door. Additionally, the door includes a heating function to prevent fogging and condensation.
- 4. Efficient Mobility:** Equipped with a three-dimensional partial three-wheel drive system, ensuring smooth, stable, durable, and reliable operation.
- 5. Safety Features:** Incorporates an over-temperature alarm function and automatic power-off feature in case of abnormal situations. Power-off recovery prevents data loss due to power outages and crashes.
- 6. Sleek Design:** Boasts a streamlined appearance with a 304 brushed anti-corrosion stainless steel interior lining, featuring arc corners for easy cleaning and prevention of bacterial growth. The outer shell is constructed from electrostatic spray plastic.
- 7. Secured Operation:** The operation interface is encrypted and locked to prevent repetitive actions and human errors.

## ***Product Features - Continued***

8. **Precise Motor Control:** Utilizes a high-quality servo motor for precise speed control and exceptional stability. It includes a built-in filter magnetic ring that shields the machine from external interference, enhancing its overall stability.
9. **Efficient Cooling:** Employs imported high-quality compressors and nitrogen-free, environmentally friendly refrigerants. This combination ensures low noise levels, efficient cooling, and extended equipment longevity, even at low temperatures, without frost or icing.
10. **Enhanced Functionality:** Features integrated lighting and UV timed sterilization functions for added versatility and utility.

## ***Unique Advantages***

1. **Precise CO2 Control:** Utilizes an imported infrared CO2 sensor for automatic CO2 concentration control, ensuring sensitive and highly accurate responses. Equipped with a controller and solenoid valve, it simplifies usage, requiring only a CO2 gas source.
2. **Clean CO2 Inlet:** Features a CO2 air inlet filtration device to effectively eliminate particulate impurities, microorganisms, and other external CO2 gas contaminants.
3. **Intuitive Interface:** Equipped with an LCD touchscreen that displays CO2 concentration, temperature, speed, time, actual CO2 levels, temperature, speed, and remaining time all on one interface. This eliminates the need for interface switching, enhancing intuitive observation. Users can freely configure forward or reverse rocker rotation. The touchscreen provides real-time display of time accumulation and timing functions, with options for forced convection fan settings—continuous, automatic, or off.
4. **Data Memory:** Includes a data memory function that records temperature and rotational speed data per minute in real-time, creating historical data and real-time curves. This simplifies observation and analysis of temperature and rotational speed effects during experiments. Data can be stored for up to 12 months and conveniently imported and exported via the USB interface.
5. **Intelligent Control:** Employs PLC microcomputer intelligent control, allowing users to add programs at any time to meet specific requirements. This enhances user-friendliness and enables future programming upgrades.
6. **Precision Air Duct Design:** Features a unique precision three-channel hot and cold gas mixing circulation air duct design, ensuring uniform temperature distribution throughout the entire chamber (patented).

## Unique Advantages - Continued

7. **Stability Enhancement:** Incorporates a self-balancing system design to improve machine stability and prolong service life (patented).
8. **Effortless Cleaning:** Built-in diversion waterproof system allows easy, thorough cleaning of the internal cavity without any dead ends or special tools required (patented).
9. **Quick Fixing:** Designed with a quick-fixing device for the rocking plate, enabling rapid fixation or unlocking in just 5 seconds. The built-in aluminum rocking plate combines beauty, elegance, and lightweight functionality. It can be easily operated with one hand, saving time and effort, and significantly boosting work efficiency (patented).
10. **Safety and Convenience:** User-friendly design includes an instant-stop or slow-stop function when the lid is opened, enhancing safety and convenience while minimizing shear force on cells and ensuring greater stability.
11. **Ambient Temperature Control:** Specially equipped with an external ambient temperature probe for real-time display of ambient temperature on the panel, facilitating precise control of the chamber's temperature.
12. **Access Management:** Offers optional three or more levels of management permissions. Each permission tier includes an independent username and password for login, security settings, parameter adjustments, and data access, simplifying management.
13. **Humidity Control:** Optional built-in active humidity control module, which doesn't occupy extra space, and an external water replenishing bucket for automatic water replenishment. Utilizes a high-precision humidity probe to maintain humidity levels of up to 95% during normal cultivation at 37°C, effectively preventing sample volatilization. Real-time humidity display is available.



UMSI-325-2TC



UMSI-325-3TC

## Technical Specifications

Model	UMSI-325-1TC	UMSI-325-2TC	UMSI-325-3TC
Number of overlays	1 layer	2 layers	3 layers
Control interface	LCD touchscreen		
Rotation speed	10-300rpm		
Speed control accuracy	1rpm		
Shaking throw	50mm Standard/26mm Optional		
Internal usable height	378mm		
Maximum load	50kg		
Volumn	325L		
Temperature control mode	PLC control mode		
Temperature control range	4-60 °C		
Temperature display resolution	0.1 °C		
Temperature fluctuation	±0.1 °C		
Temperature field uniformity	±0.5 °C @37 °C		
Working environment temperature	5-35 °C		
CO2 measurement principle	IR sensor detection		
CO2 control range	0-20%		
CO2 display resolution	0.001		
CO2 supply	0.05-0.1MPa is recommended		
Sterilization method	UV sterilization		
Tray size	963×540mm		
Tray capacity of shake flask	250ml×66 2000ml×18	500ml×45 3000ml×14	1000ml×28
Illumination	FI tube, 30W		
Heating power	800W		
Cooling power	350W		
Power supply	AC220V±10%, 50-60Hz		
Timing function	0-999.9hours		
Data export interface	USB interface		
Historical data storage	Three months		
Push-pull blackout curtain	Optional		
Dimension(W×D×H)	1430×847×648mm		
Package size(W×D×H)	1538×980×810mm		
Net weight/Gross weight	245kg/275kg		